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UNITED STATES GOVERNMENT

Memorandum

TO : Director of Communications

OCE-M76-477
DATE: 04 November 1976

25X1 FROM :
Chief, Communications Engineering

SUBJECT: Monthly Narrative Summary Report--October 1976

1. On 26-27 October 1976, an Agency Data Communications Symposium was conducted under ORD sponsorship. Office of Data Processing and Office of Communications personnel along with representatives from industry and a speaker provided by DCA presented a wide variety of papers. The symposium objective, to provide an opportunity for technical planning, engineering, design and software personnel to review requirements, new technology, exchange viewpoints and ideas, was achieved. Engineers presented papers and participated in presenting material covering SKYLINK, SKYMUX, CDS, ITS-W and HATS.

25X1 2. The satellite remains out with little hope
25X1 for recovery. All Atlantic stations continue to access the
 satellite without problems.

3. The procurement specification for the new SC-3 small satellite field terminal was completed. A transmittal letter is being forwarded to OL.

25X1 4. The final SKYLINK terminal of the SC-1
procurement effort was accepted for delivery. This terminal
will remain at the contractor's plant for use in developing
a wideband conversion kit to provide full 500 MHz
25X1 satellite coverage. A contract was negotiated with the con-
tractor, to provide a
prototype retrofit modification kit for this wideband conver-
sion.

25X1 5. The installation of an SC-1A terminal was started
at A site survey for a future installation at
was completed.

25X1 6. The shielded enclosure installation in the new
building at was completed on 24 October.

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SUBJECT: Monthly Narrative Summary Report--October 1976

25X1 7. The first six motor generators, built to a jointly
approved [] specification, were delivered.
25X1 Three units were funded by and delivered []
25X1 []. One unit is being shipped to [] for eventual
25X1 installation in [] and the other two are being shipped
to [] for installation in two [] countries.

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8. The FY-77 worldwide equipment program reviews have been completed. The approved programs with associated narratives are being prepared for transmission to the respective Areas.

9. After many delays, confusion and procrastination, the roof level generator room was approved and funded for []
The main fuel tank for the generator will be housed in the basement; and the fuel will be fed to the day tank on the roof by means of a high lift fuel transfer system. The roof of the generator room also includes the mounting base for the later installation of the SC-1A antenna.

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10. TEMPEST problems are still being encountered with the M-40 teletype machine. COMSEC acceptance is pending modification development by Teletype Corp.

25X1 11. Testing of the SK/SE-113 SATCAL is nearing completion.
The unit has passed all performance tests with only minor difficulties. The system is currently being installed at []
[] for testing as a part of the total SKYMUX
equipment package.

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25X1 12. On 27 and 28 October, the final test phase of the
25X1 [] Black Patch was completed. During this 48-hour period,
25X1 a SKYLINK failure was simulated with [] SKYLINK stations
25X1 working [] through the [] via the DP-1 at 4800 bps.
The [] continues to function properly and is fully
operational.

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25X1 13. The [] system engineer, has returned from []
The T-96 multiplexer system is installed and under test by
[]. The system will go into on-line operation
25X1 when [] are confident equal or superior per-
25X1 formance over the T-20 system has been achieved.

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SUBJECT: Monthly Narrative Summary Report--October 1976

14. SKYMUX testing on the [] test is progressing very well and will be completed by 5 November 1976. The Ops evaluation is scheduled for 8 through 12 November 1976. A MX-113 was shipped to [] in October for use in testing of future SKYMUX stations in the [] Area.

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15. A CDS endurance test was started on 10 October to exercise the system under full traffic loading conditions. Shortly after the start of the test, a number of major software problems were discovered causing postponement of further testing. A minimum schedule impact of two weeks is anticipated as a result. A link between MAX-III and CDS was installed and successfully tested.

16. On 14 and 15 October, a visit was made to Collins Radio, Dallas, for discussions on the design and implementation of a working model front-end for a MAX system.

17. The AFT system software design review was held at DBA, Melbourne, Florida, 5 and 7 October. While DBA displayed a good understanding of the software effort required, concern was expressed regarding the limited number of programmers currently assigned to the project. On 13 October, DBA advised us of the resignation of their AFT Program Manager, effective 12 November. DBA designated their senior AFT system programmer as the new Program Manager. DBA subsequently assigned two more programmers to the project team.

18. Delivery of the Field Station Unattended Operation (FSUO) prototype system has been delayed until 4 November in order to allow the vendor time to complete his operating and technical documentation packages.

19. The [] Remote Receiver Site study initiated during the reporting period has progressed to the point where only two alternatives are being seriously considered. These are the utilization of the [] System or the launching of a dedicated [] satellite system. The more promising proposal appears to be the use of the [] system and "modified" SKYLINK terminals. [] and OD&E are preparing channel estimates (voice, TTY & control) for [] remote-controlled monitor stations. This information will be forwarded to OC-E/SED/FAB for a satellite power impact review.

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SUBJECT: Monthly Narrative Summary Report--October 1976

25X1 20. Harris Corporation delivered the Laserfax test bed equipment to Headquarters on 12 October. The receiver was installed at Headquarters on 13 October and the transmitter installed at [] on 18 October. Initial end-to-end tests were conducted on 29 October after problems in getting the T-1 line operational were resolved. The technical evaluation of the Phase II-B proposal from Harris was completed on 14 October.

25X1 21. The installation of the [] communication system began on 9 October. To date, all distribution, station and data cables have been pulled-in and are being terminated at IDF's. Cabinets, underfloor ducting and power cables are being installed in the communications equipment room. Completion of the communications system is presently contingent upon the pending delivery of equipment. An interim secure voice and data capability was provided for the components of the OS which moved into the second floor office space at [] during the week of 16-23 October.

22. Site installation plans for the basic HATS links were received from Raytheon on 6 October. These plans have been reviewed and will be accepted with only minor changes. Surveys of the Sites selected for the additional links procured under the 30 September contract, was performed by Raytheon representatives on 1 October 1976.

23. Preliminary preparations for the Hewlett-Packard data terminal system continue. Mr. [] have participated in preparing the RFP. Arrangements have been made to train two staff programmers designated for the project, in Hewlett-Packard assembly language and operating system characteristics.

24. Preparation of logic changes to accommodate the forthcoming revision of ACP-127 format line four is nearly complete. Design of ARS software modifications has been completed and the logic tested at WASH-ARS. Modifications to the MAX program are nearly complete. Testing will be accomplished at WASH-MAX early in November.

CONFIDENTIAL

SUBJECT: Monthly Narrative Summary Report--October 1976

25X1 25. The instrumentation of the [] Communi-
cations Equipment Room (CER) on a pilot model basis was
approved on 29 September. The Project Report and Action Plan
have been submitted and funds in the amount of \$30,000 have
been identified. The major system problems identified are
the high error rate and the number of customer problems reported
for which no troubles were found (NTF). The equipment problems
are being addressed by OC-O/[]. OC-E will address the
support problems and interface with the customer to determine
if the NTF problems occur in the customer's equipment or in
the data transmission system.

26. The evaluation of the operation of Field Station
Narrowband Secure Voice systems which was initiated in August,
continued during the reporting period. Although no single
major fault has been detected, certain areas where improvements
are recommended have been identified. The Equipment Section
of the Facilities Branch is presently in the process of com-
piling a detailed report which will include specific recommenda-
tions and procedures for maximizing the VADAC III for consistency
of performance. The interface between the narrowband and wide-
band secure voice systems is currently being investigated.

25X1 27. CED received delivery of the Telcom 3061 [] Receive
System on 29 October 1976. QAB evaluations are scheduled to
begin in November.

25X1 28. A prototype HF [] Field/Base System was
forwarded to OC-O/COD early in October for operational evalua-
tion. CED personnel briefed COD personnel in the use of the
equipments and provided technical assistance.

25X1 29. Production of twenty-five BC-98 Battery Chargers and
twenty-five RT-519 [] Transmitters was completed
with these units passing QAB and being placed in [] stock.

25X1 30. Efforts toward getting SV/A-8 production started were
initiated this month. System parameters were agreed to by COD,
an action plan was drawn up, a drafting package is well underway,
requisitions for parts have been placed, and a family of
accessories for [] have been
identified for inclusion in the program.

SUBJECT: Monthly Narrative Summary Report--October 1976

31. Final assembly and testing of the [] was completed during October. The system, complete with test equipment and operational crystals, is ready for packing and shipping when approval is received from COD.

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32. Mr. [] represented CED at a COD-sponsored briefing of the "Secure Data Communications Terminal" configuration of the RS-531 for members of the [] on 7 October 1976 at the []

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33. The Crystal Laboratory is working on a technique required to process crystals for the SV-8 system. To date, the RX crystals have been successful. However, the TX crystal requires additional research. QAB has provided all the equipment necessary to test SV-8 experimental crystals.

34. Mr. [] accompanied representatives from SOG, OL and OC-O/COD to the [] to review [] stock and OC support facilities.

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35. TSB/[] hosted for OC-E/SED a Timeplex course on the Model MX-113 Multiplexer. The course dates were 18-22 October.

36. There were a total of 405 TECHREQ messages processed this month.

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